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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/805,268	03/13/2001	James T. Whitehead	C4-702	3197

26799 7590 01/09/2004

IP LEGAL DEPARTMENT
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EXAMINER

PREVIL, DANIEL

ART UNIT	PAPER NUMBER
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2636

DATE MAILED: 01/09/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/805,268

Applicant(s)

WHITEHEAD, JAMES T.

Examiner

Daniel Previl

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 October 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

This action is responsive to communication filed on October 22, 2003.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Plonsky (US 5,049,857) in view of Chieu et al. (US 5,777,561).

Regarding claims 1, 17, Plonsky discloses first and second field generators (power amplifier 21c, pedestal 6 and power amplifier 22c, pedestal 7), each having a respective antenna for generating an electromagnetic field in a detection zone defined between antennas (coils) (fig. 1; fig. 2; col. 6, lines 20-48); at least one of field generator (a control system and detection assembly 8 connected to the power amplifiers 21, 22c provides overall control of the operation) being responsible to a presence of at least two electronically detectable tags in detection zone (makes a determination as to the presence in the zone 3 of articles 2 bearing tags 4 having a valid markers 5) (col. 5, lines 42-49).

Plonsky discloses every feature of the claimed invention but fails to explicitly disclose varying an intensity of at least one electromagnetic fields so that only one electronically detectable tags is detected in electromagnetic field.

However, Chieu discloses the step for varying an intensity of at least one of electromagnetic fields so that only one of electronically detectable tags is detected in electromagnetic field (by varying the modulation strength of the weak, modulated signal, the returned signal strength of signals from the tags required to overcome the coupled modulator signal is increased or decreased thereby allowing the base station to select a group of tags based on the returned signal strength) (col. 7, lines 5-10; col. 8, lines 53-67).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Chieu in Plonsky. Doing so would detect accurately the presence of a plurality of tags without interfering with each other within a surveillance zone.

Regarding claim 2, the above combination discloses all the limitations in claim 1 and Chieu further discloses the step of adjusting amplitude of electric power delivered to the antenna of the field generator producing electromagnetic field (varying the modulating strength, amplitude modulation) (col. 7, lines 5-55).

Regarding claim 3, Plonsky discloses electromagnetic fields in response to a receipt of corrupted data from at least one of two electronically detectable tags in

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detection zone (magnetic energy including the perturbation energy created by the presence of any markers 5 in the zone 3) (col. 5, lines 33-41).

Regarding claims 4-5, 10, Plonsky discloses a controlling means for detecting the presence of at least two electronically detectable tags in detection zone and for varying the intensities of electromagnetic fields in response to detection (control system 8 provides control in response to the transmitted and received magnetic energy to the presence in the zone 3 of articles 2 bearing tags 4 having a valid makers, adjustment the signal levels) (col. 5, lines 42-49; col. 6, lines 36-48).

Regarding claim 6, the above combination discloses all the limitations in claim 1 and Chieu further discloses one of field generators varies an intensity of a second one of electromagnetic fields in response to the presence of at least two electronically detectable tags in detection zone (col. 7, lines 5-10). Same motivation as claim 1.

Regarding claim 7, the above combination discloses all the limitations in claim 1 and Chieu further discloses electromagnetic fields is varied in inverse proportion to each other (increase, decrease) (col. 7, lines 5-10).

Regarding claim 8, Plonsky discloses an outer perimeter of each of electromagnetic fields is defined by a minimum field intensity necessary to detect one of electronically detectable tags (decreasing current to the transmitter coil) (col. 2, lines 51-64).

Regarding claim 9, the examiner takes the official notice that " a portion of perimeters of each of electromagnetic fields substantially abut each another" is well known in the art.

Regarding claims 11, 12, the above combination discloses all the limitations in claim 1 and Chieu further discloses the step of varying the intensity one of electromagnetic fields until there is no more than one electronically detectable tag within the perimeter of the associated electromagnetic field (no tag in the field in a position to be read by antenna 185) (col. 8, lines 50-55).

Regarding claims 13, 14, the above combination discloses all the limitations in claim 1 and Chieu further discloses one of electromagnetic field is varied in both small and large step (increase, decrease) (col. 7, lines 5-10).

Regarding claim 15, although, the above combination discloses all the limitations set forth in claims but fails to specify third and fourth field generators wherein third antenna is located vertically above first and second; and fourth and fourth antenna is located vertically below first, second and third antenna; electromagnetic field by third and fourth antenna are perpendicular to the fields of first and second antennas. Since, Plonsky discloses a plurality of generators associated with coils (fig. 1-fig. 2). It would have been obvious to any skill artisan at the time the invention was made to add more field generators as desired and place antennas in any position as desired to detect accurately the presence of a plurality of tags without interfering with each other within a surveillance zone.

Regarding claim 16, Plonsky discloses no wires connect each of field generators to one another and no wires connect each of antennas to one another (fig. 1).

Regarding claim 18, Plonsky discloses electromagnetic fields in response to a receipt of corrupted data from at least one of two electronically detectable tags in detection zone (magnetic energy including the perturbation energy created by the presence of any markers 5 in the zone 3) (col. 5, lines 33-41).

Regarding claim 19, the above combination discloses all the limitations in claim 1 and Chieu further discloses varying an intensity of a second one of electromagnetic fields in response to the presence of at least two electronically detectable tags in detection zone (col. 7, lines 5-10). Same motivation as claim 1.

Regarding claim 20, the above combination discloses all the limitations in claim 1 and Chieu further discloses electromagnetic fields is varied in inverse proportion to each other (col. 7, lines 5-10)

Response to Arguments

3. Applicant's arguments filed on October 22, 2003 have been fully considered but they are not persuasive.

According to Applicant's argument on page 2 "prior art~~y~~ fails to disclose an electronic detection tag system in which an electromagnetic field in a detection zone between at least two generating antennas is varied". The examiner respectfully disagrees with the Applicant because Chieu discloses the generation

of electromagnetic field (Rf energy 21) between two antennas 185 and 185' in response to tags 20 and 20' that varied the distance from the base station 10 (fig. 1; col. 3, lines 50-67; col. 4, lines 1-47).

ELECTROMAGNETIC FIELD: the regions of space near electric currents, magnets, broadcasting antennas etc., regions in which electric and magnetic forces may act. Generally the EM is regarded as a modification of space itself, enabling it to store and transmit energy.

The definition of electromagnetic field above could help Applicant understand much better Chieu's reference.

According to Applicant's argument on page 3 " Chieu fails to disclose the generation of an electromagnetic field between two antennas that is used to detect the presence of tags, or varying any field within a detection zone". The Applicant is correctly admitted that Chieu discloses the step of varying distances from the base station related to the tags 20 and antennas 185 (fig. 1, fig. 2; col. 3, lines 50-67).

Contrary to Applicant's argument in regard to "not a varying of an actual electromagnetic field in a detection zone between two generators". Chieu discloses the step varying distances from the base station related to antennas 185 and tags 20 (fig. 1-fig. 2; col. 3, lines 50-67).

In response to Applicant's argument that there is no suggestion to combine Plonsky and Chieu. The examiner recognizes that references cannot be arbitrarily combined and that there must be some reason why one skilled in the

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art would be motivated to make the proposed combination of primary and secondary references. In re Nomiya, 184 USPQ 607 (CCPA 1975). However, there is no requirement that a motivation to make the modification be expressly articulated. The test for combining references is what the combination of disclosures taken, as a whole would suggest to one of ordinary skill in the art. In re MCLAughlin, 170 USPQ 209 (CCPA 1971). References are evaluated by what they suggest to one versed in the art, rather than by their specific disclosures. In re Bozek, 163 USPQ 545 (CCPA 1969). In this case, Plonsky discloses an electromagnetic field between to generator antennas and Chieu discloses RF energy related to a plurality of antennas 185 and tags 20. So it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Chieu in Plonsky in order to detect accurately tags in the area by communicating as taught by Chieu (col. 2, lines 40-52).

For at least the above reason, the rejection of claims 1-20 is sustained.

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Crossfield (US 6,486,655) discloses a magnetic position sensing techniques.

McGinn (US 5,130,697) discloses a method and apparatus for shaping a magnetic field.

Bettine (US 6,400,273) discloses an EAS system with wide exit coverage and reduced over-range.

Issacman et al. (US 6,127,928) discloses a method and apparatus for locating and tracking documents and other objects.

Tyren (US 5,760,580) discloses a method for excitation and detection of magnetic elements by a mechanical resonance.

Tyren (US 6,417,771) discloses a sensor, a method and system for remote detection of objects.

Granovsky (US 5,276,430) discloses a method and electromagnetic security system for detection of protected objects in a surveillance zone.

Weaver (US 5,703,566) discloses an anti-shoplifting security system.

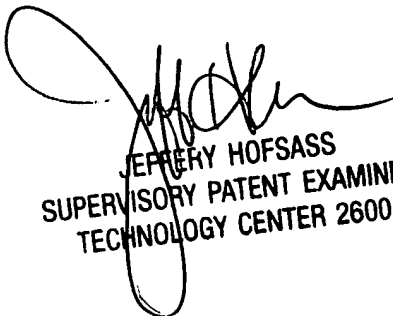
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel Previl whose telephone number is 703 305-1028. The examiner can normally be reached on Monday-Thursday. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeff Hofsass can be reached on 703 305 4717. The fax phone numbers for the organization where this application or proceeding is assigned are 703 872-9314 for regular communications and 703 872-9315 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 305-4700.

Daniel Previl
Examiner
Art Unit 2632

DP
December 29, 2003


JEFFERY HOFSSASS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600